C1 Cancel'd.

[0011] U.S. Patent Application Serial No. 09/854,944 entitled "A High Power Density Super-Conducting Electric Machine", filed May 15, 2001 (atty. dkt. 839-1019);

[0012] U.S. Patent Application Serial No. 09/854,943 entitled "Cryogenic Cooling System For Rotor Having A High Temperature Super-Conducting Field Winding", filed May 15, 2001 (atty. dkt. 839-1062);

[0013] U.S. Patent Application Serial No. 09/854,464 entitled "High Temperature Super-Conducting Racetrack Coil", filed May 15, 2001 (atty. dkt. 839-1063); and

[0014] U.S. Patent Application Serial No. 09/855,034 entitled "High Temperature Super Conducting Rotor Power Leads", filed May 15, 2001 (atty. dkt. 839-1064).

✓**IN THE CLAIMS**

✓Cancel claim 3 without prejudice.

✓Cancel claims 12-16 without prejudice in review of the restriction requirement.

Please substitute the following amended claim(s) for corresponding claim(s) previously presented. A copy of the amended claim(s) showing current revisions is attached.

C2

1. (Amended) A rotor for a synchronous machine comprising

a cylindrical magnetic solid rotor core having at least one conduit extending through the core and parallel to a core axis;

a race-track super-conducting coil winding extending around the rotor core, wherein said coil winding is in a plane of the at least one conduit;

C2 cncld.

a coil support extending through the at least one conduit of the core and attaching to opposite long sides of the coil winding, wherein a gap is between said coil support and said conduit such that the coil support is thermally isolated from said conduit, and

a pair of end shafts extending axially from said core and attached to the core.

2. (Amended) A rotor as in claim 1 wherein the rotor core includes a pair of flat surfaces formed on opposite long sides of the rotor core, and said long sides of the coil winding are adjacent the flat surfaces, and wherein said at least one conduit has an opening on each of said flat surfaces.

C3

5. (Amended) A rotor as in claim 4 wherein an insulating tube inserted in the at least one conduit of the rotor core separates the coil support from the core.

C4

17. (Amended) In a synchronous machine, a rotor comprising:

a cylindrical rotor core having a pair of planer sections on opposite sides of the core and extending longitudinally along the core, at least one conduit extending through said core and having openings on each of said planer sections;

a super-conducting coil winding extending around at least a portion of the rotor core, said coil winding having a pair of side sections adjacent said planer sections of the core, and said side sections aligned with the openings of the at least one conduit;

C4 cncl'd.

a coil support extending through the at least one conduit and attached to the side sections of the coil winding, wherein said coil support is thermally isolated from the rotor core;

a first end shaft extending axially from a first end of the rotor core, and

a second end shaft extending axially from a second end of the rotor core.

C5

19. (Amended) In a rotor as in claim 17 wherein said coil support further comprises at least one tension rod extending through the at conduit of the core and said tension rod attaches to coil housings at opposite ends of the rod, wherein each coil housing wraps around one of the side sections of the coil.

C6

21. (Amended) A rotor as in claim 20 wherein an insulating tube inserted in the conduit of the rotor core separates the tension rod from the core.

REMARKS

The rejection of claims 1-11 and 17-27 as being anticipated by Rabinowitz (U.S. Patent No. 4,176,291) is traversed. The claims have been amended to make clear that the rotor core has a conduit extending through the core, and that the coil support, extending through the conduit, is attached to opposite sides of the coil winding. Rabinowitz does not disclose conduits extending through a rotor core, and does not disclose a coil support attached to opposite sides of the coil.